

**CYANIDE BY COLORIMETRIC****METHOD SM 4500-CN'E-1999 (2011)**

*ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 4020.*

Facility Name: \_\_\_\_\_ VELAP ID: \_\_\_\_\_

Assessor Name: \_\_\_\_\_ Analyst Name: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

**Relevant Aspect of Standards****Method  
Reference****Y****N****N/A****Comments**

Records Examined: SOP Number/ Revision/ Date \_\_\_\_\_ Analyst: \_\_\_\_\_

Sample ID: \_\_\_\_\_ Date of Sample Preparation: \_\_\_\_\_ Date of Analysis: \_\_\_\_\_

1) Were samples Cooled,  $\leq 6^{\circ}\text{C}$ , NaOH to pH >10, and reducing agent added if oxidizer present?

40CFR136.3  
Table 1I

2) Were samples distilled by SM 4500-CN-C and analyzed in 14 days?

40CFR136.3  
Table 1I

3) For a spectrophotometer was the wavelength 578 nm or for a filter photometer was a red filter used having a maximum transmittance at 575 to 580 nm?

2.a

4) Was the light path > 1 cm (10 cm for concentrations < 0.02  $\mu\text{g/mL}$ )?

2.b  
4.a

5) Was Chloramine-T solution stored in refrigerator and made weekly?

3.a

6) Was NaOH dilution solution prepared using 1.6 grams NaOH into 1 liter distilled water?

3.f

7) Were stock cyanide solutions standardized against silver nitrate, and were their titers checked weekly? (not required if certified titrant used)

3.b

8) Were working standard cyanide solutions prepared fresh daily and stored in glass-stoppered bottles?

3.c

9) Were working standards prepared by diluting to 40 mL with NaOH dilution solution?

4.a

10) Was pyridine-barbituric acid reagent stored in refrigerator in an amber bottle and discarded if a precipitate developed?

3.d

11) Was the acetate buffer adjusted to a pH of 4.5 with glacial acetic acid?

3.e

Notes/Comments:

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
12) Were samples diluted as needed with NaOH dilution solution to 40 mL prior to analysis?	4.b				
13) After the addition of the chloramine-T solution and acetate buffer, were samples mixed by inverting twice and allowed to stand <b>exactly</b> 2 minutes?	4.b				
14) After addition of the 5 mL pyridine-barbituric acid reagent, were samples diluted to 50 mL with distilled water, mixed, and allowed to stand <b>exactly</b> 8 minutes?	4.b				
15) Was 40 mL of NaOH dilution solution used as a blank, carried through the same procedures for color development as samples and included in the calibration curve?	5				
Notes/Comments:					